

5.6 AIR QUALITY

5.6.1 Introduction and Methodology

FSEIR #01-01 analyzed the overall impacts to air quality from development of the Woods and Vistas neighborhoods rather than specific impacts associated with individual parcels such as the EastLake III Seniors parcel. FSEIR #01-01 indicated that development of the Woods and Vistas neighborhoods would not be consistent with the growth projections of the local regional air quality plan and, consequently, would not be consistent with the goals and objectives of that plan. This impact was considered significant and unmitigable. Once the neighborhoods were constructed, operational-related emissions would have resulted in a significant air quality impacts related to stationary and mobile sources and would therefore result in significant regional impacts. These impacts were unmitigable. Construction-related impacts would have varied depending on the equipment in use at any given time. Construction activities were projected to generate sufficient quantities of fugitive dust to create a significant impact. These construction-related impacts were documented as significant and unmitigable.

This section consists of a summary of existing air quality conditions, anticipated impacts related to these conditions and mitigation measures required to reduce these impacts to a level below significance. A residual impact statement has been included in order to characterize the level of significance of impacts after mitigation measures have been applied.

The August 17, 2005 Air Quality Impact Analysis prepared for the project by Dudek serves as the main source data for this section. This report is included as *Appendix E* to this EIR. Specific methods used to generate this technical report are contained therein.

5.6.2 Existing Conditions

Air quality varies as a direct function of the amount of pollutants emitted into the atmosphere, the size and topography of the air basin and the prevailing meteorological conditions. Air quality problems arise when the rate of pollutant emissions exceeds the rate of dispersion. Reduced visibility, eye irritation, and adverse health impacts upon those persons termed sensitive receptors are the most serious hazards of existing air quality conditions in the area. Sensitive receptors are those persons under five years of age, or older than 65, and/or persons with health problems; consequently a listing of sensitive receptors includes hospitals, convalescent homes, schools, and retirement facilities.

Primary criteria pollutants are emitted directly from a source (e.g., an automobile) into the atmosphere and include carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂)

and particulates; particulate matter is generally comprised of inert particles that become airborne, such as dust or ash. Particulate matter which is less than 10 microns in diameter is referred to as PM₁₀. Reactive organic compounds (ROC) are also a primary pollutant, but are not a "criteria" pollutant (see discussion below). Secondary pollutants are created by atmospheric chemical and photochemical reactions. Secondary pollutants include oxidants, ozone (O₃) and sulfate particulates; these oxidants are commonly referred to as "smog".

The significance of a pollutant concentration is determined by comparing it to state and/or federal ambient air quality standards. These standards represent the maximum allowable atmospheric concentrations of various pollutants which may occur and still protect public health and welfare, with a reasonable margin of safety.

Climate and Meteorology

Southern California's weather patterns are largely the result of a semi-permanent high pressure system which lies to the west. The semi-permanent Pacific high pressure system, coupled with daytime heating, typically produces an onshore seabreeze during the daytime. At night, an offshore breeze is typically caused by radiational cooling of the land. San Diego County is comprised of five distinct climate zones – maritime, coastal, transitional, interior and desert. The project site is located in southwestern San Diego County within the City of Chula Vista, a coastal climate zone. The climate is dominated by the influence of the Pacific Ocean. Humidity is moderate, temperatures are mild and low clouds, fog and dampness are common. Chula Vista experiences an average high of approximately 79.0 degrees Fahrenheit (F) and an average low of approximately 45.6 degrees F. Annual average rainfall is 10.2 inches, with the majority of precipitation occurring from November to March. The remainder of the year is typically dry.

Winds across the project area result mainly from temperature differences between the ocean to the west and the mountains and desert to the east. These winds are steered by local topography, but they are primarily onshore by day (especially in summer) and offshore at night (especially in winter). Dominant onshore winds during the summer flow from the southwest, with moderate speeds ranging 7-8 miles per hour (mph). In winter, the onshore flow occurs less frequently, and is replaced by a lighter (5-8 mph) and persistent offshore flow from the northeast. The steering influences of local topography such as canyons may modify this onshore-offshore distribution, but most local wind patterns retain their strongly bimodal dominance.

In addition to the typical daytime onshore flows and nocturnal offshore breezes that control horizontal transport processes in the region important for air pollution dispersion, coastal areas of San Diego County (which, from an atmospheric perspective, includes the proposed project site) are also characterized by numerous atmospheric inversions that control the vertical extent

through which pollutants can be mixed. Atmospheric, subsidence, radiational and marine inversions, all of which can occur at the project site depending on the season and atmospheric conditions, can all influence dispersal and mixing of pollutants. Subsidence inversions are caused by compressional heating of descending cold air. This type of inversion is generally caused in the summer and can often result in extreme ozone concentrations as it becomes difficult for pollutants to disperse. Radiational inversions are caused through cooling of air near the ground surface in the winter as a result of radiational cooling of the earth surface during the night. In eastern Chula Vista, these inversions often disperse by midday during the winter due to late morning/early afternoon warming. Marine inversions may form in late spring and early summer when cool air over the ocean can intrude under the relatively warm air that is characteristic of the eastern Chula Vista area. When inversions occur at altitudes lower than the surrounding topographic features, pollutants can become especially concentrated.

Regulatory Environment

The Federal Clean Air Act has resulted in national air quality regulation being a role of the U.S. Environmental Protection Agency (EPA). In California, the task of air quality management and regulation has been legislatively granted to the California Air Resources Board (CARB) with subsidiary responsibilities assigned to local air quality management districts (regional level) and air pollution control districts (county level).

The EPA has established the “National Ambient Air Quality Standards.” The National Ambient Air Quality Standards may not be exceeded more than once a year. Annual standards are not to be exceeded any time of the year. The CARB has established California Ambient Air Quality Standards and is responsible for the regulation of mobile emission sources within the State, while local air quality management districts/air pollution control districts are responsible for enforcing standards and regulating stationary sources. The management of the eastern Chula Vista area is under the jurisdiction of the San Diego Air Pollution Control District (SDAPCD). While legal authority to control different pollution sources is separated, the District is responsible for reflecting federal, state and local measures in a single plan to achieve ambient air quality standards in San Diego County.

The California Clean Air Act requires areas that have not attained State ambient air quality standards for ozone, carbon monoxide, sulfur dioxide or nitrogen dioxide to prepare plans to attain the standards by the earliest practicable date. San Diego County has been designated by the CARB as a non-attainment area for ozone. Because the region is a non-attainment area for ozone, the APCD and San Diego Association of Governments (SANDAG) had jointly developed the San Diego Regional Air Quality Strategy (RAQS) to identify feasible emission control measures to achieve compliance with the State ozone standard. The RAQS addresses volatile

organic compounds (VOCs) and oxides of nitrogen (NO_x), which are the precursors to the photochemical formation of ozone. The last RAQS was completed in 2004. It identified all feasible control measures that can be implemented from 2004 – 2007. Because the APCD has placed very stringent emission restrictions on most major sources throughout the last 20 to 30 years, the available number of additional control measures is limited. Continued slow emissions reductions are anticipated from evolving industrial technology and from mobile source reduction programs that offset any forecast rate of population and transportation growth. *Table 5.6-1, Existing State and Federal Air Quality Pollutant Standards* provides a summary of state and federal pollutant standards.

TABLE 5.6-1
Existing State and Federal Air Quality Pollutant Standards

Pollutant	Federal Standard	State Standard
Ozone (O₃)		
1-Hour Concentration	> 0.12 ppm	> 0.09 ppm
Carbon Monoxide (CO)		
1-Hour Concentration	None	> 20.0 ppm
8-Hour Concentration		
Nitrogen Dioxide (NO_x)		
Annual Average	> 0.53 ppm	None
1-Hour Concentration	None	0.25 ppm
Inhalable Particulates (PM₁₀)		
Annual Average	> 50 µg/m ³	> 20 µg/m ³
24-Hour Concentration	> 150 µg/m ³	> 50 µg/m ³
Ultra Fine Particulates (PM_{2.5})		
Annual Average	> 15 µg/m ³	> 12 µg/m ³
24-Hour Concentration	> 65 µg/m ³	> µg/m ³

Notes: ppm = parts per million

µg/m³ = microgram per cubic meter

Source: Dudek and Associates, August 17, 2005

The City of Chula Vista has developed a number of strategies and plans aimed at improving air quality locally. The City is a part of the Cities for Climate Protection Program headed by the International Council of Local Environmental Initiatives. In November 2002, Chula Vista adopted the Carbon Dioxide (CO₂) Reduction Plan in order to lower the community's major greenhouse gas emissions, strengthen the local economy, and improve the global environment. The CO₂ Reduction Plan focuses on reducing fossil fuel consumption and decreasing reliance on

power generated by fossil fuels, which would have a corollary effect in the reduction of air pollutant emissions into the atmosphere. In order to achieve the CO₂ Reduction Plan goal, measures including green power, municipal clean fuel vehicle purchases, telecommuting and telecenters, municipal building upgrades and trip reduction, to name a few, have been identified.

In addition, as a part of its Growth Management Ordinance and Growth Management Program, the City of Chula Vista requires that an Air Quality Improvement Plan (AQIP) be prepared for all major development projects with air quality impacts equivalent to that of a residential project of 50 or more dwelling units. The purpose of the AQIP is to provide for air quality improvements and energy conservation through improved project design and construction of structures that exceed mandated energy code requirements. The AQIP Guidelines establish a process for AQIP compliance.

The AQIP must provide an analysis of air pollution impacts resulting from the project and demonstrate the best available design to reduce vehicle trips, maintain or improve traffic flow, including implementation of appropriate traffic control measures and other means of reducing emissions from the project. The AQIP must also address the action measures contained in the Chula Vista CO₂ Reduction Plan. In order to meet the AQIP requirements developers can either participate in the Chula Vista GreenStar Building Efficiency Program or evaluate the project using the Chula Vista CO₂ INDEX model, including any necessary site plan modifications.

Existing Pollution Constituents and Attainment Status

Each criteria pollutant is either in “attainment” or in “non-attainment” status. The criteria for non-attainment designation varies by pollutant. A system of monitoring stations which measure ambient air quality has been established to assist in the enforcement of the standards. *Table 5.6-2, Ambient Air Quality Data at the Chula Vista Monitoring Station*, indicates the Federal and State standards for pollutants and provides a summary of local pollutant concentration levels at the closest monitoring station to the project site.

Ozone

Ozone (O₃) (smog) is formed by photochemical reactions between oxides of nitrogen and reactive organic gases rather than being directly emitted. Ozone is a pungent, colorless gas typical of Southern California smog. Elevated ozone concentrations result in reduced lung function, particularly during vigorous physical activity. This health problem is particularly acute in sensitive receptors such as the sick, the elderly, and young children. Ozone levels peak during summer and early fall.

TABLE 5.6-2
Ambient Air Quality Data at the Chula Vista Monitoring Station
 (# Days Standards Were Exceeded and Maximum Concentrations for Periods Indicated)

Pollutant/Standard	2000	2001	2002	2003	2004
Ozone (O₃)					
1-Hour > 0.09 ppm (State)	0	2	1	0	1
1-Hour > 0.12 ppm (Federal)	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.09	0.10	0.12	0.08	0.10
Carbon Monoxide (CO)					
1-Hour > 20. ppm (State)	0	0	0	0	0
8-Hour > 9. ppm (State/ Federal)	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	5.8	5.6	4.3	6.9	3.9
Max. 8-Hour Conc. (ppm)	3.1	4.7	2.6	5.4	2.5
Nitrogen Dioxide (NO_x)					
Annual Average > 0.053 ppm (Federal)	0	0	0	0	0
1-Hour > 0.25 ppm (State)	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.072	0.071	0.093	0.102	0.072
Inhalable Particulates (PM₁₀)					
Annual Average > 50 µg/m ³ (Federal)	0	0	0	0	0
Annual Average > 20 µg/m ³ (State)	1	1	1	1	1
24-Hour > 150 µg/m ³ (Federal)	0	0	0	0	0
24-Hour > 50 µg/m ³ (State)	1	1	1	1	1
Max. 24-Hour Conc. (µg/m ³)	52	64	50	75	44
Ultra-Fine Particulates (PM_{2.5})					
Annual Average > 15 µg/m ³ (Federal)	0	1	0	0	0
Annual Average > 12 µg/m ³ (State)	1	1	1	1	1
24-Hour > 65 µg/m ³	0	0	0	0	0
Max. 24-Hour Conc. (µg/m ³)	40.5	41.0	41.0	41.0	33.0

Note: Standards for sulfur dioxide, particulate sulfate and particulate lead are met with a wide margin of safety, and are therefore not shown.
 ppm = parts-per-million; µg/m³= microgram per cubic meter

Source: Dudek, August 17, 2005.

San Diego County reached a major milestone when it was designated in 2003 as an attainment area for the Federal one-hour ozone standard, although the entire San Diego Air Basin is still designated as a non-attainment area for the Federal eight-hour and State one-hour ozone standards.

Carbon Monoxide

Carbon monoxide (CO) is formed by the incomplete combustion of fossil fuels, almost entirely from automobiles. It is a colorless, odorless gas that can cause dizziness, fatigue, and impairments to central nervous system functions.

The entire San Diego Air Basin (SDAB) has not exceeded either Federal or State standards for CO in the past five years with published monitoring data.¹ The SDAB is designated as an attainment area for Federal and State CO standards.

Nitrogen Oxides

NO_x compounds are a primary component of the photochemical smog reaction. It also contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition. Nitrogen dioxide (NO₂), a reddish brown gas, and nitric oxide (NO), a colorless, odorless gas, are formed from fuel combustion under high temperature or pressure. NO₂ decreases lung function and may reduce resistance to infection.

The entire SDAB has not exceeded either Federal or State standards for nitrogen dioxide in the past five years with published monitoring data. It is designated as an attainment area under the Federal and State standards.

Sulfur Dioxide and Sulfates

Sulfur Dioxide (SO₂) is a colorless, pungent, irritating gas formed primarily by the combustion of sulfur-containing fossil fuels. In humid atmospheres, some of SO₂ may be changed to sulfur trioxide and sulfuric acid mist, with some of the latter eventually reacting with other materials to produce sulfate particulates. At sufficiently high concentrations, sulfur dioxide irritates the upper respiratory tract. At lower concentrations, when in combination with particulates, SO₂ appears able to do still greater harm by injuring lung tissues. Sulfur oxides, in combination with moisture and oxygen, can yellow the leaves of plants, dissolve marble and eat away iron and steel. Sulfur oxides can also react to form Sulfates (SO₄) which reduce visibility and cut down the light from the sun.

¹ Spikes in air quality pollutant constituents resulting from wildfires in October 2003 are considered anomalous and are, therefore, not considered for attainment consideration purposes.

The entire SDAB has not exceeded either Federal or State standards for SO₂ in the past five years with published monitoring data. The SDAB is in attainment with all applicable Federal and State SO₂/ SO₄ standards.

Lead

Lead (Pb) is found in old paints and coatings, plumbing and a variety of other materials. Once in the blood stream, lead can cause damage to the brain, nervous system, and other body systems. Children are highly susceptible to the effects of lead.

Concentrations of lead are no longer monitored in San Diego County as levels are well below established air quality standards. The entire SDAB is in attainment for the Federal and State standards for lead.

Particulate Matter

Particulate matter is the term used for a mixture of solid particles and liquid droplets found in the air. Coarse particles (all particles less than or equal to 10 micrometers in diameter, or PM₁₀) come from a variety of sources, including windblown dust and grinding operations. Fine particles (less than 2.5 micrometers, or PM_{2.5}) often come from fuel combustion, power plants, and diesel buses and trucks. Fine particles can also be formed in the atmosphere through chemical reactions. Coarse particles (PM₁₀) can accumulate in the respiratory system and aggravate health problems such as asthma.

EPA's scientific review concluded that fine particles (PM_{2.5}), which penetrate deeply into the lungs, are more likely than coarse particles to contribute to adverse health effects.

The EPA has not designated a Federal PM₁₀ attainment classification for SDAB, but the area is designated as a non-attainment area for State PM₁₀ standards. Concentrations of PM_{2.5} in the SDAB are considered in non-attainment with the Federal and State standards.

As shown in *Table 5.6-2*, Air Quality within the project vicinity is in compliance with both State and Federal requirements for CO and NO_x. While Federal standards were in compliance with O₃ and PM₁₀, state standards were exceeded. Finally, while the Federal maximum 24-hour concentration for PM_{2.5} was not exceeded within the past five years, the Federal standard for annual average concentrations of PM_{2.5} was exceeded in 2001, and the State standard for annual average concentrations of PM_{2.5} was exceeded every year.

5.6.3 Thresholds of Significance

The following significance criteria included in Appendix G of the CEQA Guidelines were used to determine the significance of air quality impacts.

Would the project:

- 1) Conflict with or obstruct the implementation of the applicable air quality plan?
- 2) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?
- 3) Result in cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?
- 4) Expose sensitive receptors to substantial pollutant concentrations?
- 5) Create objectionable odors affecting a substantial number of people?

Specific thresholds of significance for regional air pollution emissions have not been adopted by the City of Chula Vista or any responsible or commenting agency such as the San Diego Air Pollution Control District. The City of San Diego has recently updated its CEQA Assessment guidelines for air quality, and has included emissions levels that should be considered “substantial” even if there is no means to directly correlate these emissions to ambient air quality. In the absence of any other guidelines, use of the City of San Diego numerical thresholds are recommended in order to determine if the operational phase of the project would have a potentially significant impact on air quality; these thresholds are based in part on San Diego APCD Rule 20.2. Although these guidelines focus on emissions from stationary sources, it is an effective screening tool to determine if air quality impacts are potentially significant and thus warrant further study and/or mitigation. Both construction and operational air quality impacts estimated in this environmental analysis would be considered significant if any of the applicable significance thresholds presented in *Table 5.6-3* below are exceeded.

TABLE 5.6-3
Numeric Thresholds for Determining Air Quality Impacts

	Potentially Significant Emissions (lb/day)				
	ROC	NOx	CO	SOx	PM-10
Emissions Threshold	137	250	550	250	100

Source: Dudek and Associates, August 17, 2005

5.6.4 Environmental Impacts

Would the project conflict with or obstruct the implementation of the applicable air quality plan?

Project consistency with any regional air quality plan is determined in terms of whether overall growth has been correctly anticipated in any given sub-region. The August 16, 2005, Linscott, Law and Greenspan Traffic Study (included as *Appendix D* to this EIR), indicates that the previously approved Commercial-Tourist site would have generated approximately 3,660 average daily trips while the proposed use will generate 1,976. Because the proposed project's trip generation would be less than that of the originally anticipated Commercial-Tourist use and because development of the project site has previously been anticipated under the adopted General Plan, the change in land use would not in and of itself constitute a significant impact. Additionally, the project is consistent with all applicable emissions control measures identified within the RAQS. As a result, the proposed project would not conflict with or obstruct implementation of RAQS/SIP.

As discussed in Section 3.0 and previously in this section, the City's Growth Management Ordinance requires the preparation of an Air Quality Improvement Plan (AQIP) for all major developments. An AQIP has been prepared in accordance with the City's AQIP Guidelines. The AQIP is included as part of the EastLake III SPA Amendment. The applicant has chosen to participate in the Chula Vista Greenstar Program. Participation in the Chula Vista Greenstar Program will result in 50% or more of all proposed structures being compliant with State of California Energy Efficiency Standards (per Title 24, Part 6). Due to the ever evolving technologies for energy efficiency, the exact program will be identified with building permit applications. Compliance with the Chula Vista Greenstar Program ensures that the project is consistent with applicable local air quality planning.

Optional Construction Road: The implementation of a temporary construction road would not change the amount of construction trips, but would rather reallocate approximately 25% of the trips to Wueste Road instead of Olympic Parkway. It would result in construction-related air quality impacts which are addressed below. The optional temporary construction access road would not conflict with an applicable air quality plan.

Optional Pedestrian Trail: Development of the proposed trail, in conjunction with the proposed project, would also result in construction-related air quality impacts which are addressed below. The optional trail would not result in conflicts with an applicable air quality plan.

Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?**Construction**

Construction activities, including soil disturbance dust emissions and combustion pollutants from onsite construction equipment and from offsite trucks hauling dirt, cement or building materials would create a temporary addition of pollutants to the local airshed. These emissions are variable in time and space and differ considerably among various construction projects. Implementation of the project would generate construction-related air pollutant emissions from two general activity categories, entrained dust and vehicle emissions. Entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM₁₀ emissions. Vehicle exhaust results from internal combustion engines used by construction equipment and vehicles which result in emissions of CO, ROC, NO_x, and PM₁₀. Emissions from the construction phase of the project were estimated through the use of emissions factors from the URBEMIS 2002 model. The project would involve three construction phases: (1) site preparation, (2) building construction, and (3) paving. The project is estimated to require 33 months to complete construction. It was assumed that heavy construction equipment would be operating at the site for eight hours per day, six days per week during project construction. *Table 5.6-4, Estimated Maximum Daily Construction Emissions*, summarizes construction-related impacts anticipated with project development.

As indicated in *Table 5.6-4, Estimated Maximum Daily Construction Emissions*, construction of the project would remain below the allowable daily thresholds for all criteria pollutants except ROCs. Many interior and outdoor painting supplies contain high levels of volatile organic compounds (VOCs), which are a type of ROCs, to help them dry faster. VOCs emit smog-forming chemicals into the air that are a major contributor to ground-level ozone pollution. Maximum construction-generated ROC emissions of 360.27 pounds per day are anticipated to be associated with project construction in 2008 (time period when painting of buildings and interiors would occur) and would exceed the ROC threshold of 137 pounds per day. The exceedance of the daily ROC standard is considered significant as this would result in the release of a substantial concentration of pollutants.

Although construction-related emissions would not surpass PM₁₀ thresholds, the project will generate nuisance dust and fine particulate matter.

TABLE 5.6-4
Estimated Maximum Daily Construction Emissions
(LBS/DAY)

	ROC	NOx	CO	SOx	PM ₁₀
YEAR 2006					
Grading	11.55	82.66	90.99	0	23.74
Building Construction	21.39	143.46	172.06	0	6.28
2006 Daily Maximum:	21.39	143.46	172.06	0	26.11
Significance Criteria	137	250	550	250	100
Significant?	No	No	No	No	No
YEAR 2007					
Building Construction	21.31	138.38	174.03	0	5.67
2007 Daily Maximum:	21.31	138.38	174.03	0	5.67
Significance Criteria	137	250	550	250	100
Significant?	No	No	No	No	No
YEAR 2008					
Building Construction	21.22	133.36	175.83	0	5.13
Architectural Coatings	329.72	0.56	11.90	0	0.19
Asphalt	9.33	56.76	75.14	0	2.01
2008 Daily Maximum:	360.27	190.67	262.87	0	7.33
Significance Criteria	137	250	550	250	100
Significant?	Yes	No	No	No	No

Source: Dudek, August 17, 2005.

Operation

In addition to estimating mobile source emissions, the URBEMIS 2002 model was also used to estimate emissions from the project area sources. Generators of air quality emissions associated with the long-term operational phase of the project include resident and guest vehicular traffic, wood burning fire places, space heating and cooling, water heating and consumer products. *Table 5.6-5, Summary of Estimated Operational Air Pollutant Emissions*, provides a summary of all operation-related air quality impacts. Operational traffic volumes were taken from the traffic study prepared by Linscott, Law & Greenspan on August 16, 2005. It was assumed in the air quality analysis that the project will be completed by Summer 2009.

As shown in *Table 5.6-5, Summary of Estimated Operational Air Pollutant Emissions*, the project operational emissions from both area sources and vehicular emissions are substantially below the recommended significance criteria for all pollutants. Therefore, impacts are considered less than significant.

TABLE 5.6-5
Summary Of Estimated Operational Air Pollutant Emissions

	ROC	NO _x	CO	SO _x	PM ₁₀
	Lbs/day				
SUMMER 2009					
Area Source Emissions	24.69	6.21	2.97	0.00	0.01
Vehicular Emissions	17.92	23.70	192.34	0.14	25.06
TOTAL	42.61	29.91	195.31	0.14	25.07
Significance Criteria	137	250	550	250	100
Significant?	No	No	No	No	No
WINTER 2009					
Area Source Emissions	24.65	6.21	2.64	0.00	0.01
Vehicular Emissions	18.33	30.46	216.52	0.14	25.06
TOTAL	42.97	36.67	219.17	0.14	25.07
Significance Criteria	137	250	550	250	100
Significant?	No	No	No	No	No

Source: Dudek and Associates, August 17, 2005.

Optional Construction Road: Implementation of the road would not result in additional construction trips arriving/leaving the site, but rather an alternate route of travel. Because this facility won't result in additional traffic beyond that assumed with the proposed project, impacts associated with vehicle/equipment pollutants would not occur. Ingress and egress of the site at the southern limit may result in an increased amount of dust, dump truck debris, blow-off, etc. near Wueste Road and the eastern edge of the OTC. This impact is considered significant, therefore mitigation is provided.

The proposed optional construction access road would be built, utilized and removed during the project construction period, therefore there would be no operational impacts associated with this feature.

Optional Pedestrian Trail: Although construction of this facility is anticipated to consist of minimal use of equipment to scrape and level the top portion of the soil to create a level walking surface, construction of the trail would add to the vehicle/equipment-generated pollutants being generated from construction of the overall project site. That said, this impact would be very minor compared to the whole project which is well under the thresholds, therefore a significant

impact would not occur. Similar to the proposed project, albeit very minor, development of the trail would result in PM-10 release during scraping and reworking topsoil. In order to reduce these potential PM-10 impacts, mitigation is provided.

Once operational, the optional pedestrian trail would not result in additional vehicular trips, but would rather reduce automobile trips between the OTC and future development. This project component would theoretically help reduce pollutant generating automobile trips once operational. Therefore, this project feature would not result in operational air quality impacts.

Would the project result in cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

As discussed above, construction of the project would remain below the allowable daily thresholds for all criteria pollutants except ROCs. The exceedance of the daily ROC standard is considered significant. In order to reduce the level of significance, mitigation is provided. Project operational emissions would not increase any criteria pollutant for which the project region is in non-attainment.

Because the proposed project would contribute to the overall development/build-out of the Woods and Vistas communities, it would provide an incremental contribution to the unmitigable air quality impacts documented in FSEIR #01-01. Because this EIR is a tiered document from FSEIR #01-01, significant unmitigable impacts must be brought forward in future tiering exercises (i.e., this EIR) so that decision makers understand that significant unmitigable impacts will still occur and will not be eliminated through development of the proposed project as currently proposed.

Optional Construction Road: Construction of this temporary feature would contribute to the cumulative impacts of development of the site. The construction of the road would contribute to ROCs which would be above the significance threshold. Because this project feature, as with the proposed project, would contribute to the overall development/build-out of the Woods and Vistas communities, significant, unmitigable construction impacts would still occur. Because this facility would not exist once construction has ceased, operational contributions to regional air quality concerns would not occur.

Optional Pedestrian Trail: Cumulative construction-related impacts generated by the proposed project would also occur if this optional project component were to be constructed. This trail would contribute to the ROCs generated which exceed the threshold. Because this project

feature, as with the proposed project, would contribute to the overall development/build-out of the Woods and Vistas communities, significant, unmitigable construction impacts would still occur. However, because the optional trail would be for pedestrian use, this project feature would not result in a significant operations impact.

Would the project expose sensitive receptors to substantial pollutant concentrations?

Projects that generate traffic may result in the formation of CO hot spots. Although the SDAB is currently an attainment area for CO, exhaust emissions can potentially cause a direct, localized “hotspot” impact at or near the proposed development. CO is a product of incomplete combustion of fossil fuel. Unlike ozone, CO is emitted directly out of a vehicle exhaust pipe and is heavier than air. The optimum conditions for a CO hotspot is cool and calm weather at a congested major roadway intersection with sensitive receptors nearby and where vehicles are either idling or moving at a stop-and-go pace.

To verify that the project would not cause or contribute to a violation of the CO standard, a screening evaluation of the potential for CO hot spots was conducted. A CO Hotspot Analysis is typically conducted when all three of the following occur: 1) the level of services (LOS) of an intersection or roadway decreases to a LOS E or worse, 2) signalization and/or channelization is added to an intersection and 3) sensitive receptors such as residences, commercial developments, schools and hospitals are located in the vicinity of the affected intersection or roadway segment.

With implementation of the required intersection signalization at the Olympic Parkway/Project Driveway intersection, all project intersections would operate at a LOS D or above both the near term and community build-out scenarios. Because all project area intersections are anticipated to operate at traffic LOS D or above, generation of carbon monoxide (CO) associated with project-related traffic would not contribute to a CO hotspot where sensitive receptors could be affected by prolonged exposure to high concentrations of CO.

Optional Construction Road: The proposed project would not result in a CO hot spot impact. Because this construction access road would actually reduce traffic at the project driveway/Olympic Training Center intersection, the anticipated concentration of emissions, although not extreme enough to constitute a CO hot spot, would actually decrease. Rerouting a portion of the construction traffic to Wueste Road would not subject sensitive receptors, including recreational trail users, to significant pollutant concentrations due to the short-term and sporadic nature of trips on the roadway.

Optional Pedestrian Trail: Construction of the proposed optional trail would not subject sensitive receptors at the OTC to substantial pollutant concentrations due to the short duration of construction within this area. Once constructed, the trail, which will be limited to pedestrian use, would theoretically help to reduce vehicle trips within the immediate project/OTC area which would actually result in a beneficial air quality impact.

Would the project create objectionable odors affecting a substantial number of people?

During the construction phase of the proposed project, it is anticipated that some odors would result from the asphalt used for creating the private streets within the proposed project site. These impacts would be short-term in nature and therefore would be less than significant.

During the operational phase of the proposed project, anticipated odors would be generated from cooking facilities and landscape/building maintenance. In general, these odors are not considered to create a significant nuisance to surrounding receptors. Therefore, impacts related to objectionable odors would be less than significant.

Optional Construction Road: Odors generated during construction (i.e., during operation of the temporary access road), would be limited to vehicle exhaust. Due to the lack of a substantial number of people in the road area, impacts would be less than significant.

Optional Pedestrian Trail: Odors generated during construction would be limited to vehicle exhaust. Due to the lack of a substantial number of people in the trail area, impacts would be less than significant. The proposed optional trail would not result in odor production. Because the trail would be limited to pedestrian traffic, transportation modes which are not odor producing, impacts would not occur.

5.6.5 Level of Significance Prior to Mitigation

During construction, ROC emissions would exceed the daily standard. This impact is considered significant. Although construction-related emissions would not surpass PM₁₀ thresholds, the project will generate nuisance dust and fine particulate matter.

5.6.6 Mitigation Measures

- 5.6-a To the maximum extent feasible, the project developer shall use zero-Volatile Organic Compounds (VOC)-content architectural coatings during project construction/application of paints and other architectural coatings to reduce ozone

precursors. If zero-VOC paint cannot be utilized, the developer shall avoid to the maximum extent feasible, application of architectural coatings during the peak smog season: July, August, and September.

5.6-b Prior to approval of any grading permit, the following measures shall be placed as notes on all grading plans and implemented during grading to reduce dust and exhaust emissions (PM₁₀) and ozone precursors (ROC and NO_x):

- a) Minimize simultaneous operation of multiple construction equipment units
- b) Use low pollutant-emitting equipment
- c) Use catalytic reduction for gasoline-powered equipment
- d) Use injection timing retard for diesel-powered equipment
- e) Water the grading areas a minimum of twice daily to minimize fugitive dust
- f) Stabilize graded areas as quickly as possible to minimize fugitive dust
- g) Apply chemical stabilizer or pave the last 100 feet of internal travel path within the construction site prior to public road entry
- h) Install wheel washers adjacent to a paved apron prior to vehicle entry on public roads
- i) Remove any visible track-out into traveled public streets within 30 minutes of occurrence
- j) Wet wash the construction access point at the end of the workday if any vehicle travel on unpaved surfaces has occurred
- k) Provide sufficient perimeter erosion control to prevent washout of silty material onto public roads
- l) Cover haul trucks or maintain at least 12 inches of freeboard to reduce blow-off during hauling
- m) Suspend all soil disturbance and travel on unpaved surfaces if winds exceed 25 mph
- n) Cover/ water onsite stockpiles of excavated material; and
- o) Enforce a 20 mile-per-hour speed limit on unpaved surfaces.

5.6.7 Significance of Impacts after Mitigation

Implementation of the above outlined mitigation measures would reduce significant air quality impacts to below significance.